

DEERE POWER SYSTEMS GROUP OF DEERE & COMPANY

EXECUTIVE ORDER U-R-004-0155 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours) 8000			
2003	3JDXL02.9017	2.9	Diesel				
SPECIAL I	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION				
	Direct Diesel Injec	ction	Industrial Equipment				

The engine models and codes are attached.

÷

The following are the exhaust certification standards (STD), and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr); and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER	EMISSION STANDARD	··			EXHAUST (g/kw-l		OPACITY (%)			
CLASS	CATEGORY		нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT	-	8.8	-	-	-	5	11	12

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Raphael Susnewis

Executed at El Monte, California on this 22 day of January 2003.

Allen Lyons, Chief

Mobile Source Operations Division

Engine Model Sum ry Form

N-A-004-0155

Attachment 1 of 2

Manufacturer: Deere Power Systems Group of Deere and

Engine category: Nonroad CI

EPA Engine Family: 3JDXL02,9017

Mfr Family Name: 320DA

Process Code: New Submission

0	٠	72.7 Fr				7 <u>.3</u>						
Control E J193	DOL			1								1
9.Emission Control evice Per SAE J193	Ē	EΜ	E	E	EX	Ξ	EM	M	EM	E	EM	ΣH
8.Fuel Rate: 9.Emission Control (lbs/ht)@peak torque Device Per SAE J1930									200	*		
g enb	0	0	Q	Q	0	0	Q	0	0	0	0	,
8.Fuel Rate: hr)@peak tor	@16C	5.87@1500	10.14@1000	15.21@1500	5.65@1500	@ 100	5,43@1500	@150	@160	@ 160	@160	@ 160
8.Fuel /hr)@p	17.64@1600	15.87	10.14	15.21	15.65	10.14@1000	15.43	15.43@1500	14,77@1600	14.77@1600	14.77@1600	14.77@1600
		1										
7.Fuel Rate: mm/stroke@peak torque	009	500	000	500	200	000	500	500	62.7@1600	1600	62.7@1600	1600
7.Fuel Rate: n/stroke@pe torque	68@1600	67@1500	60@1000	63@1500	63@1500	60@1000	63@1500	63@1500	2.7@	62.7@1600	2.7@	62.7@1600
, mm									9	9	9	9
(s	009	500	000	500	200	000	500	200	.009	009	009	009
6.Torque @ RPM (SEA Gross)	47.49@1600	46.02@1500	39.38@1000	146.02@1500	121.68@1500	139.38@1000	121,68@1500	121.68@1500	140.86@1600	40.86@1600	140.86@1600	36@1
6.Torq (SE	147.	146.	139.	146.	121.	139.	121	121.	140	140.	140.	140,86@1600
∄ ≿	Q	0	2	0	Q	Q	Q	0	0	0	0	
5.Fuel Rate: /hr) @ peak or diesels on!	@250	@250	7.64@2500	@250	@250	17.64@2500	@250	@250	9,84@2300	19.84@2300	9.84@2400	@240
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	22.05@2500	22.05@2500	17.64	22.05@2500	22.05@2500	17.64	22.05@2500	22.05@2500	19,84	19.84	19.84	19.84@2400
ate: peak F onty)	2500	2500	45.00@2500	56.00@2500	56.00@2500	45.00@2500	.56.00@2500	56.00@2500	54.40@2300	0@2300	2400	54.40@2400
4.Fuel Rate: //stroke @ peak (for diesel only)	58.00@2500	56.00@2500	000	.00@	00 @	.00@	.00@	.00@	.40@	54.40@	40@	.40@
4.Fuet Rate: mm/stroke @ peak HP (for diesel only)	2	56	45	26	56	45	36	56	72	57	54.40@2400	54
Ņ. S)	00	8	8	8	*00	00	57.66@2500	8	00	8	52.97@2400	8
3.BHP@RPM (SAE Gross)	60.35@2500	57.66@2500	57,66@2500	57.66@2500	57.66@2500	48.28@2500	3@25	57.66@2500	7@23	52.97@2300	7@24	7@24
3.B. (SA	60.3	57.6	57.6	57.6	57.6	48.2	57.6	57.6	52.97@2300	52,9	52.9	52.97@2400
<u> </u>								. 11 4 .			à	
2.Engine Model	OD.	<u>О</u> 6	06	<u>Д</u> 6	ୁ ପ୍ର	9D	3029D	<u>a</u> 6	Об	G 6	3029D	3029D
Engine	3029D	3029D	3029D	3029D	3029D	3029D	302	3029D	3029D	3029D	302	302
											*	
Code	80A	50A	30C	50B	51	50C	351	152	150	350	′05	/55
l.Engine Code	3029DF180A	3029DF150A	3029DF180C	3029DF150B	3029DF151	3029DF150C	3029DFG51	3029DF152	3029DAT50	3029DFG50	3029DPY05	3029DLV55
<u>т</u>	302	302	302	302	30,	302	30	30,	30,	305	30,	30,

Attachment 20 2

Engine Model Summary Form

ED414-6004-6155-114

Manufacturer: Deere Power Systems Group of Deere and

Mir Family Name: 320DA

Running Change Process Code:

Engine category: Nonroad Cl
EPAEngine Family: 3JDXL02.9017

	4	
8.Fuel Rate: 9.Emission Control (bs/hr)@peak torque Dovice Per SAE J1930)@2400 17.37@2400 126.11@1400 52.3@1400 12.37@1400 EM ▲	
8.Fuel Rate: (lbs/hr)@peak torque	12.37@1400	And the state of t
7.Fuel Rate: mm/stroke@peak torque	52.3@1400	
6.Torque @ RPM (SEA Gross)	126.11@1400	
4 Rate: 5.Fuel Rate: © peak HP (lbs/hr) © peak HP sel only) (for diesels only)	17.37@2400	
4.Fue stroke for die		
3.BHP@RPM (SAE Gross)	45.59@2400	
.Engine Code 2.Engine Model	3029D 45.59@2400 42.90	
Engine Code	3029DPY11	**Andred